



FERTILITY AND STERILITY

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COVER

Automatically identified and color-coded follicles in a stimulated ovary (see page 2164).

MODERN TRENDS

2163 Ultrasound automated volume calculation in reproduction and in pregnancy

B. Ata and T. Tulandi
Montreal, Quebec, Canada

Ultrasound automated volume calculation has been used for antral follicle count, follicle tracking, and obstetric examinations. It rapidly measures volumes with high accuracy and the results are highly reproducible.

2171 Current methods of tubal patency assessment

R. D. Saunders, J. M. Shwayder, and S. T. Nakajima
Louisville, Kentucky

Various screening modalities for tubal patency in the initial subfertility investigation are reviewed with emphasis on the hysterosalpingo-contrast procedure.

EDITOR'S CORNER

2180 There is no pimping at Harvard

A. H. DeCherney
Bethesda, Maryland

As I slowly close the door on this part of my career—but keeping the peephole open—I feel that the timing is perfect, that it's time for a new generation to have their influence.

2182 A modern trends retrospective

E. E. Wallach
Lutherville, Maryland

The Modern Trends section has raised the level of interest and readership of *Fertility and Sterility*, while providing important, up-to-date material for students, scientists, and practitioners.

CONTROVERSY I

2184 Stress reduces conception probabilities across the fertile window: evidence in support of relaxation

G. M. Buck Louis, K. J. Lum, R. Sundaram, Z. Chen, S. Kim, C. D. Lynch, E. F. Schisterman, and C. Pyper
Rockville, Maryland; Columbus, Ohio; and Oxford, United Kingdom

Higher salivary α -amylase concentrations reduced conception probabilities each day during the fertile window, suggesting that stress may exert its effect through the sympathetic medullar pathway.

2190 Other nonstress influences can alter salivary α -amylase activity

B. J. Stegmann
Iowa City, Iowa

More research is required to fully evaluate the impact of stress on both fertile and infertile women, and discovery of a biomarker that correlates well with psychosocial stress would be a great advantage to researchers.

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CONTROVERSY II

2192 Initial experience with a risk-sharing in vitro fertilization–embryo transfer program with novel features

J. P. Stassart, R. B. Bayless, C. L. Casey,
and W. R. Phipps
Woodbury, Minnesota

Of the first 100 consecutive participants in a straightforward risk-sharing IVF-ET program that included gonadotropin costs and a full payment refund if no successful birth occurred, 88 had a normal live birth or have an ongoing undelivered pregnancy past 20 weeks.

2198 Ethical application of Shared Risk programs in assisted reproductive technology

E. D. Levens and M. J. Levy
Rockville, Maryland

Shared Risk programs require adherence to core principles: transparency, patient autonomy, and appropriate medical care. These programs improve utilization of and perseverance with fertility treatment, receiving strong patient endorsements.

SPECIAL CONTRIBUTIONS

2200 Epidemiology of male and female reproductive disorders and impact on fertility regulation and population growth

K. T. Barnhart
Philadelphia, Pennsylvania

A 10-year vision for reproductive research conducted by the National Institute of Child Health and Human Development should include clinically relevant issues with a goal to diagnose and treat reproductive disorders and disruptors of these processes.

2204 The FIGO classification of causes of abnormal uterine bleeding in the reproductive years



M. G. Munro, H. O. D. Critchley, and I. S. Fraser, for the FIGO Menstrual Disorders Working Group
Los Angeles, California; Edinburgh, United Kingdom; and Sydney, New South Wales, Australia

The FIGO classification system for causes of abnormal uterine bleeding in the reproductive years is designed to standardize research protocols and to facilitate both medical education and communication with patients.

2209 International Committee for Monitoring Assisted Reproductive Technology (ICMART) world report: assisted reproductive technology 2003



K. G. Nygren, E. Sullivan, F. Zegers-Hochschild, R. Mansour, O. Ishihara, G. D. Adamson, and J. de Mouzon
Stockholm, Sweden; Sydney, Australia; Santiago, Chile; Cairo, Egypt; Moroyama, Japan; Palo Alto and San Jose, California; and Paris, France

The International Committee for Monitoring Assisted Reproductive Technologies' (ICMART) annually collects, analyzes, and reports on worldwide access, efficacy, and safety of assisted reproductive technologies. The 2003 World Report documents 433,427 initiated cycles with a delivery rate per aspiration of 22.4% for in vitro fertilization, 23.3% for intracytoplasmic sperm injection, and 173,424 babies born.

ENDOMETRIOSIS

2223 Analysis of *FOXP3* polymorphisms in infertile women with and without endometriosis

G. M. André, C. P. Barbosa, J. S. Teles, F. L. Vilarino, D. M. Christofolini, and B. Bianco
Santo André, Brazil

An aberrant immunologic mechanism has been suggested to be involved in the development of endometriosis. In a case-control study, we were able to demonstrate an association between *FOXP3* polymorphisms and the risk of idiopathic infertility (rs2280883 and rs2232368) and endometriosis (rs3761549) in Brazilian women.

2228 Estrogen and progesterone receptor isoform distribution through the menstrual cycle in uteri with and without adenomyosis



M. K. Mehaseb, R. Panchal, A. H. Taylor, L. Brown, S. C. Bell, and M. Habiba
Leicester, United Kingdom

In uterine adenomyosis, abnormal expression of estrogen and progesterone receptors in the endometrium and myometrium suggests an overall uterine defect, contributing to its pathogenesis, symptomatology, and resistance to medical treatment.

2236 High-density fine-mapping of a chromosome 10q26 linkage peak suggests association between endometriosis and variants close to *CYP2C19*

J. N. Painter, D. R. Nyholt, A. Morris, Z. Z. Zhao, A. K. Henders, A. Lambert, L. Wallace, N. G. Martin, S. H. Kennedy, S. A. Treloar, K. T. Zondervan, and G. W. Montgomery
Brisbane, Queensland, Australia; and Oxford, United Kingdom

Refinement of a previously reported linkage peak for endometriosis and fine-mapping across a region of chromosome 10 provides suggestive evidence of association to the *CYP2C19* gene.

2241 Altered expression of activin, cripto, and follistatin in the endometrium of women with endometrioma

A. L. L. Rocha, P. Carrarelli, R. Novembri, L. Sabbioni, S. Luisi, F. M. Reis, and F. Petraglia
Siena, Italy; and Belo Horizonte, Brazil

Endometriotic patients have disturbed endometrial cycle-related changes of activin-related protein mRNA expression.

2247 The effect of laparoscopic ovarian cystectomy versus coagulation in bilateral endometriomas on ovarian reserve as determined by antral follicle count and ovarian volume: a prospective randomized study

T. Var, S. Batioglu, E. Tonguc, and I. Kahyaoglu
Ankara, Turkey

Decreases in antral follicle count and ovarian volume were found from both coagulation and cystectomy, but this decrease occurred statistically more often in cystectomized ovaries than in coagulated ovaries.

GENETICS

2251 Outcomes of spontaneous and assisted pregnancies in Turner syndrome: the U.S. National Institutes of Health experience

T. N. Hadnott, H. N. Gould, A. M. Gharib, and C. A. Bondy
Bethesda and Chevy Chase, Maryland

The maternal and fetal outcomes in 13 pregnancies (7 assisted and 6 spontaneous) in women with Turner syndrome are discussed, along with the potential for major maternal complications.

2257 Divergent effects of the 677C > T mutation of the 5,10-methylenetetrahydrofolate reductase (MTHFR) gene on ovarian responsiveness and anti-Müllerian hormone concentrations

R. Pavlik, S. Hecht, R. Ochsenkühn, U. Noss, P. Lohse, and C. J. Thaler
Munich, Germany

In patients undergoing ovarian hyperstimulation, the MTHFR 677 C>T mutation is associated with lower ovarian responsiveness and higher anti-Müllerian hormone concentrations, suggesting this mutation affects follicular recruitment and maturation.

IN VITRO FERTILIZATION

2263 Transvaginal versus transabdominal ultrasound guidance for embryo transfer in donor oocyte recipients: a randomized clinical trial



D. Bodri, M. Colodrón, D. García, A. Obradors, V. Vernaev, and O. Coll
Barcelona, Spain

Transvaginal ultrasound-guided embryo transfer yields similar success rates when compared with the transabdominal ultrasound-guided procedure.

2269 Impact of a group mind/body intervention on pregnancy rates in IVF patients

A. D. Domar, K. L. Rooney, B. Wiegand, E. J. Orav, M. M. Alper, B. M. Berger, and J. Nikolovski
Waltham and Boston, Massachusetts; and Skillman, New Jersey

Patients randomized before their first IVF cycle to participate in a mind/body program had higher pregnancy rates for their second IVF cycle than control subjects.

2274 Influence of follicular fluid GDF9 and BMP15 on embryo quality

F. Gode, B. Gulekli, E. Dogan, P. Korhan, S. Dogan, O. Bige, D. Cimrin, and N. Atabey
Izmir, Turkey

Higher mature GDF9 levels in the follicular fluid were significantly correlated with oocyte nuclear maturation and embryo quality.

2279 Proficiency in oocyte retrieval: how many procedures are necessary for training?

K. N. Goldman, K. S. Moon, B. J. Yauger, M. D. Payson, J. H. Segars, and B. J. Stegmann
Bethesda, Maryland; Chicago, Illinois; Washington, D.C.; and Iowa City, Iowa

The majority of fellows in training demonstrate proficiency in follicular aspirations within 20 procedures; however, a minority may require 50 procedures to achieve the proficiency of an attending physician.

2283 The Groningen assisted reproductive technologies cohort study: developmental status and behavior at 2 years

M. Jongbloed-Pereboom, K. J. Middelburg, M. J. Heineman, A. F. Bos, and M. Hadders-Algra
Groningen, the Netherlands

The present study did not find differences in developmental outcome at 2 years in children born after controlled ovarian hyperstimulation-IVF or modified natural cycle-IVF or children born to subfertile parents.

MALE FACTOR

2290 Melatonin protects human spermatozoa from apoptosis via melatonin receptor- and extracellular signal-regulated kinase-mediated pathways

J. Espino, Á. Ortiz, I. Bejarano, G. M. Lozano, F. Monllor, J. F. García, A. B. Rodríguez, and J. A. Pariente
Badajoz, Spain

After apoptosis induction with H₂O₂ in ejaculated human spermatozoa, we demonstrate that melatonin forestalls sperm apoptosis through MT1 receptor and extracellular signal-regulated kinase signaling.

2297 *CDY1* and *BOULE* transcripts assessed in the same biopsy as predictive markers for successful testicular sperm retrieval



S. E. Kleiman, O. LeHAVI, R. Hauser, A. Botchan, G. Paz, H. Yavetz, and L. Yogev
Tel Aviv, Israel

Expression of *CDY1* reinforced with *BOULE* has the highest predictive value for finding sperm cells in the testis of azoospermic men by qualitative reverse transcriptase-polymerase chain reaction.

2303 Detection of obestatin in seminal plasma and its relationship with ghrelin and semen parameters

E. Moretti, G. Collodel, F. Iacoponi, M. Geminiani, N. A. Pascarelli, S. Campagna, B. Franci, and N. Figura
Siena, Italy

Ghrelin and obestatin levels were higher in human semen versus serum. Semen obestatin levels correlated positively with sperm concentration and motility and were statistically significantly reduced in smokers and leukocytospermia.

2310 Abnormal methylation of the promoter of *CREM* is broadly associated with male factor infertility and poor sperm quality but is improved in sperm selected by density gradient centrifugation

L. Nanassy and D. T. Carrell
Salt Lake City, Utah

Increased DNA methylation was found in the promoter of *CREM* in oligozoospermic patients and patients with an abnormal protamine 1 to protamine 2 ratio, and *CREM* promoter methylation associated with sperm quality.

2315 Mitochondrial membrane potential profile and its correlation with increasing sperm motility

D. Paoli, M. Gallo, F. Rizzo, E. Baldi, S. Francavilla, A. Lenzi, F. Lombardo, and L. Gandini
Rome, Florence, and L'Aquila, Italy

There is a positive correlation between total motility and mitochondrial membrane potential, suggesting that sperm motility may be dependent on the functional integrity of the mitochondria.

2320 National semen analysis reference range reporting: adherence to the 1999 World Health Organization guidelines 10 years later

H. A. Penn, A. Windsperger, Z. Smith, S. J. Parekattil, W. W. Kuang, P. N. Kolettis, and A. K. Nangia
Kansas City, Kansas; Gainesville, Florida; Albuquerque, New Mexico; and Birmingham, Alabama

Assisted reproductive technology and non-assisted reproductive technology laboratories demonstrate significantly variable semen analysis reference range reporting using the 1999 (4th edition) World Health Organization manual guidelines.

2324 Estradiol levels in men with congenital hypogonadotropic hypogonadism and the effects of different modalities of hormonal treatment



S. Trabado, L. Maione, S. Salenave, S. Baron, F. Galland, H. Bry-Gauillard, A. Guiochon-Mantel, P. Chanson, N. Pitteloud, A. A. Sinisi, S. Brailly-Tabard, and J. Young
Le Kremlin-Bicêtre, France; Napoli, Italy; and Lausanne, Switzerland

Compared with healthy men, patients with CHH have very low total, bioavailable, and free calculated circulating E_2 levels. Testosterone and combined gonadotropin therapy, contrary to dihydrotestosterone (DHT), significantly increase E_2 levels.

OVULATION INDUCTION

2330 Letrozole and gonadotropins versus luteal estradiol and gonadotropin-releasing hormone antagonist protocol in women with a prior low response to ovarian stimulation

A. Elassar, L. Engmann, J. Nulsen, and C. Benadiva
Farmington, Connecticut

Aromatase inhibitor regimens can be a feasible alternative to luteal estradiol and antagonist protocols in recurrent poor response to controlled ovarian stimulation.

POLYCYSTIC OVARY SYNDROME

2335 Endometrial gene expression in the window of implantation is altered in obese women especially in association with polycystic ovary syndrome



J. Bellver, J. A. Martínez-Conejero, E. Labarta, P. Alamá, M. A. B. Melo, J. Remohí, A. Pellicer, and J. A. Horcajadas
Valencia, Spain

Obese women present a different endometrial gene expression than normal weight controls during the window of implantation, which is more pronounced when infertility or polycystic ovary syndrome are associated.

2342 Impact of laparoscopic ovarian drilling on anti-Müllerian hormone levels and ovarian stromal blood flow using three-dimensional power Doppler in women with anovulatory polycystic ovary syndrome



A. I. Elmashad
Benha, Egypt

Measuring anti-Müllerian hormone and three-dimensional power Doppler ovarian stromal blood flow for women with anovulatory PCOS undergoing LOD may be useful in evaluating the outcome of LOD.

2347 **Extent of metabolic risk in adolescent girls with features of polycystic ovary syndrome**



R. Hart, D. A. Doherty, T. Mori, R.-C. Huang, R. J. Norman, S. Franks, D. Sloboda, L. Beilin, and M. Hickey
Perth, Western Australia, Adelaide, South Australia, and Melbourne, Victoria, Australia; London, United Kingdom; and Auckland, New Zealand

One in three girls with PCOS is at high risk for the metabolic syndrome. One in three girls attends her general practitioner with menstrual symptoms, presenting an excellent opportunity for intervention.

2354 **Follicle-stimulating hormone suppressed excessive production of antimüllerian hormone caused by abnormally enhanced promoter activity in polycystic ovary syndrome granulosa cells**



Y. Li, L.-N. Wei, and X.-Y. Liang
Guangzhou, People's Republic of China

This study explored the cause of excessive production of antimüllerian hormone (AMH) and the effect of FSH on its overproduction as well as the expression of AMH receptor II in polycystic ovary syndrome granulosa cells.

REPRODUCTIVE ENDOCRINOLOGY

2359 **Age-related normograms of serum antimüllerian hormone levels in a population of infertile women: a multicenter study**



B. Almog, F. Shehata, S. Suissa, H. Holzer, E. Shalom-Paz, A. La Marca, S. Muttukrishna, A. Blazar, R. Hackett, S. M. Nelson, J. S. Cunha-Filho, T. Eldar-Geva, E. J. Margalioth, N. Raine-Fenning, K. Jayaprakasan, M. McIlveen, D. Wunder, T. Freour, L. G. Nardo, J. Balasch, J. Peñarrubia, J. Smeenk, C. Gnoth, E. Godehardt, T.-H. Lee, M.-S. Lee, I. Levin, R. Gamzu, and T. Tulandi
Montreal, Quebec, Canada; Modena, Italy; Cork, Ireland; Providence, Rhode Island; Glasgow, Nottingham, and Manchester, United Kingdom; Porto Alegre, Brazil; Jerusalem and Tel Aviv, Israel; Newcastle, New South Wales, Australia; Lausanne, Switzerland; Nantes Cedex, France; Barcelona, Spain; Tilburg, the Netherlands; Grevenbroich, Germany; and Taichung, Taiwan

Age-related normograms for infertile women without polycystic ovaries were produced for the 3rd to 97th percentile.

2364 **Elevated body mass index is associated with lower serum anti-müllerian hormone levels in infertile women with diminished ovarian reserve but not with normal ovarian reserve**

E. Buyuk, D. B. Seifer, E. Illions, R. V. Grazi, and H. Lieman
Bronx and Brooklyn, New York

Overweight and obesity are associated with lower random serum antimüllerian hormone levels only in women with diminished ovarian reserve.

2369 **Random anti-Müllerian hormone (AMH) is a predictor of ovarian response in women with elevated baseline early follicular follicle-stimulating hormone levels**

E. Buyuk, D. B. Seifer, J. Younger, R. V. Grazi, and H. Lieman
Bronx and Brooklyn, New York

Random anti-Müllerian hormone levels are predictive of ovarian response during controlled ovarian hyperstimulation/in vitro fertilization among women with diminished ovarian reserve diagnosed by elevated early follicular-phase follicle-stimulating hormone levels.

2373 **Patients with endometriosis and patients with poor ovarian reserve have abnormal follicle-stimulating hormone receptor signaling pathways**

R. González-Fernández, Ó. Peña, J. Hernández, P. Martín-Vasallo, A. Palumbo, and J. Ávila
Tenerife, Spain; and New York, New York

Differential expression and correlations of FSHR and FSH-regulated genes PAPP/Cyp19A1 suggest that signaling pathways activated through FSHR in normal ovaries are disrupted in patients with endometriosis and poor ovarian reserve.

REPRODUCTIVE SURGERY

2379 **Vaginal prolapse, pelvic floor function, and related symptoms 16 years after sex reassignment surgery in transsexuals**

A. Kuhn, A. Santi, and M. Birkhäuser
Berne, Switzerland

The 7.5% incidence of pelvic organ prolapse after sex reassignment surgery in transsexuals may affect the bladder, bowel, and sexual function and requires individual management.

UTERINE FRIBROIDS

2383 Gonadotropin-releasing hormone agonist increases expression of osmotic response genes in leiomyoma cells

D. M. McCarthy-Keith, M. Malik, J. Britten, J. Segars, and W. H. Catherino
Bethesda, Maryland

Leiomyoma cells had elevated basal expression of hyperosmolarity responsive genes compared with myometrial cells; the response to gonadotropin-releasing hormone agonist at pharmacologic doses suggested a loss of intracellular water.

IMAGES IN REPRODUCTIVE MEDICINE

2388 Ectopic pregnancy in a cesarean section scar

A.-J. Chiang, V. La, C.-P. Chou, P.-H. Wang, and K.-J. Yu
Kaohsiung and Taipei, Taiwan; Stanford, California; and Baltimore Maryland

A cesarean scar pregnancy was successfully treated with chemotherapy, feticide with methotrexate, and hysteroscopy.

REPRODUCTIVE BIOLOGY

2390 Hormone-induced delayed ovulation affects early embryonic development

A.-K. Bittner, B. Horsthemke, E. Winterhager, and R. Grümmner
Essen, Germany

Cetrorelix-induced delayed ovulation led to an increase in resorption sites and a decrease in embryonic weight in mice. Thus, preovulatory oocyte overripeness might have an effect on embryonic development.

2395 Maturation of human ovarian follicles is accompanied by a decrease in the CD56⁺CD16⁺ natural killer cell population

O. Fainaru, S. Hantisteanu, N. Rotfarb, M. Michaeli, M. Hallak, and A. Ellenbogen
Hadera and Haifa, Israel

Both CD56⁺CD16⁺ "cytotoxic" and CD56⁺CD16⁻ "proangiogenic" natural killer cells accumulate in antral follicles. Maturation of follicles is accompanied by a decrease in "cytotoxic" natural killer cells that may have deleterious effects on follicular angiogenesis.

2399 Cryopreservation of mouse testicular tissue: prospect for harvesting spermatogonial stem cells for fertility preservation

S. S. Gouk, Y. F. Jason Loh, S. D. Kumar, P. F. Watson, and L. L. Kuleshova
Singapore; and London, United Kingdom

Vitrification of mouse immature testicular tissue for later isolation of spermatogonial stem cells was optimized. This vitrification procedure is a time- and cost-efficient strategy to preserve stem cells for transplantation.

2404 Progesterone-regulated *B4galnt2* expression is a requirement for embryo implantation in mice



P.-T. Li, C.-J. Liao, W.-G. Wu, L.-C. Yu, and S. T. Chu
Hsinchu and Taipei, Taiwan

B4galnt2 is regulated positively by P and negatively by estrogen. The up-regulation of *B4galnt2* during pregnancy contributes to normal embryo implantation but not to embryo development.

2410 Cigarette smoke condensate exposure delays follicular development and function in a stage-dependent manner

J. C. Sadeu and W. G. Foster
Hamilton, Ontario, Canada

Cigarette smoke condensate delays ovarian follicle development and disrupts steroidogenesis, cumulus expansion, and oocyte maturation.

TECHNIQUES AND INSTRUMENTATION

2418 Development of an animal model for endometrial ablation using trichloroacetic acid

M. A. Cocuzza, M. Cocuzza, G. A. R. Maciel, E. V. da Motta, A. P. T. Cardoso, J. M. Soares Jr., and E. C. Baracat
Sao Paulo, Brazil

Many therapies are available for heavy menstrual bleeding, but actual evidence of their efficacy is lacking from scientific data. We developed an animal model for endometrial ablation using trichloroacetic acid.

2422 Bipolar hysteroscopic procedures and placement of Essure microinserts for tubal sterilization: a case control study

P. Panel, I. Grosdemouge, M. Houllier, F. Renouvel, L. Friederich, and A. Le Tohic
Le Chesnay, France

Bipolar hysteroscopic procedures concomitant with Essure placement are off-label but present a safe, effective, and convenient treatment option for women with menorrhagia and undesired fertility.

2426 Single-incision laparoscopic myomectomy with intracorporeal suturing

N. Yoshiki, T. Okawa, and T. Kubota
Tokyo, Japan

Single-incision laparoscopic myomectomy with intracorporeal suturing is a safe and effective alternative to conventional laparoscopic myomectomy in a selected group of patients with myomas.

CASE REPORT SUMMARIES

2429 Hyperreactio luteinalis in pregnancy



C. Amoah, A. Yassin, E. Cockayne, and A. Bird
Cheshire, United Kingdom

Hyperreactio luteinalis is an abnormal hypersensitive ovarian response to circulating β -hCG levels in the absence of ovulation induction. We describe its unique management in pregnancy.

2429 Ovarian hyperstimulation syndrome in a patient treated with tamoxifen for breast cancer



A. Baigent and H. Lashen
Sheffield, United Kingdom

A rare report is presented of tamoxifen-induced ovarian hyperstimulation syndrome (OHSS) in an older female with breast cancer. OHSS usually resolves with temporary tamoxifen discontinuation. Recurrence of symptoms when resuming tamoxifen is better treated with salpingo-oophorectomy to enable adjuvant treatment with anastrozole.

2429 Endometriosis in para-aortic lymph nodes during pregnancy: case report and review of literature



A. L. Beavis, K. Matsuo, B. H. Grubbs, S. A. Srivastava, C. M. Truong, M. N. Moffitt, A. M. Maliglig, and Y. G. Lin
Los Angeles, California

Endometriosis is a nonmalignant gynecologic disorder that can spread to locoregional lymphatics. This case demonstrates distant rather than regional spread, providing support for endometriosis as an aggressive systemic disease.

2429 A kink is not always a perforation: assessing Essure hysteroscopic sterilization placement



J. Borley, N. Shabajee, and T. L. Tan
London, United Kingdom

A case report describing the fallacy of interpreting a kink along the Essure microinsert outline on plain abdominal x-ray as a marker of tubal perforation.

2430 Semen analysis by electron and fluorescence microscopy in a case of partial hydatidiform mole reveals a high incidence of abnormal morphology, diploidy, and tetraploidy



K. Chatzimeletiou, A. Sioga, L. Oikonomou, S. Charalampidou, P. Kantartzi, V. Zournatzi, D. Panidis, D. G. Goulis, I. Papadimas, and B. C. Tarlatzis
Thessaloniki, Greece

Detailed semen analysis by light, electron, and fluorescence microscopy in a man whose wife had a partial hydatidiform mole revealed a high incidence of abnormal morphology and increased diploidy.

2430 Ovarian hilus cell hyperplasia as the cause of virilization in 45,X Turner's syndrome



L. F. Damle, V. Gomez-Lobo, A. R. Andrus, and P. B. Kaplowitz
Washington, D.C.

Virilization in the absence of tumor or mosaicism in Turner's syndrome may be caused by ovarian hilus cell hyperplasia and is an indication for gonadectomy.

2430 Perineal-guided endoscopic extraction of ejaculatory duct stones to treat obstructive azoospermia



V. Favilla, S. Cimino, M. Madonia, T. Castelli, G. Sortino, M. Russo, and G. Morgia
Catania and Sassari, Italy

Ejaculatory duct obstruction is often treated by transurethral resection of the ejaculatory duct, but several passes of the loop are required. The advantage of our technique is a more rapid identification of the ejaculatory duct.

2430 Pregnancy after azathioprine therapy for ulcerative colitis in a woman with autoimmune premature ovarian failure and Addison's disease: HLA haplotype characterization



F. Ferraù, S. Gangemi, G. Vita, F. Trimarchi, and S. Cannavò
Messina and Palermo, Italy

We report the case of fertility restored by azathioprine in a woman with autoimmune premature ovarian failure, Addison's disease, and ulcerative colitis.

2431 Sextuplet heterotopic pregnancy presenting as ovarian hyperstimulation syndrome and hemoperitoneum



S. L. Fisher, J. A. M. Massie, Y. J. Blumenfeld, and R. B. Lathi

Stanford and Palo Alto, California

A patient with presumed ovarian hyperstimulation syndrome following a controlled ovarian hyperstimulation with injectable gonadotropins was found to have bilateral heterotopic pregnancies in addition to a quadruplet intrauterine gestation.

2432 Six cases of tubal stump pregnancy: complication of assisted reproductive technology?



P.-C. Ko, C.-C. Liang, T.-S. Lo, and H.-Y. Huang
Tao-Yuan, Taiwan

Six women with tubal stump pregnancy were studied. Two conceived spontaneously after ovulation induction. Four conceived after in vitro fertilization–embryo transfer programs. They had previously undergone laparoscopic salpingectomy owing to tubal pregnancy or hydrosalpinx.

2431 Pregnancy after lymphadenectomy and neoadjuvant chemotherapy followed by radical vaginal trachelectomy in FIGO stage IB1 cervical cancer



E. Gottschalk, M. Mangler, A. Schneider, C. Koehler, and M. Lanowska

Berlin, Germany

We report a full-term delivery after laparoscopic lymphadenectomy, neoadjuvant chemotherapy, and radical vaginal trachelectomy as a valuable option for nulliparous women with bulky-stage cervical cancer.

2432 Cornual resection for interstitial pregnancy by laparoendoscopic single-site surgery



A. Lazard, S. Poizac, B. Courbiere, L. Cravello, M. Gamerre, and A. Agostini

Marseille, France

Cornual resection by laparoendoscopic single-site surgery appears to be a feasible procedure for treating interstitial pregnancy.

2432 A unique pathology associated with pelvic pain and adnexal mass



C. Lim, J. Hirshfeld-Cytron, C. McCarthy, Z.-M. Chen, and M. P. Milad

Chicago, Illinois

In a patient presenting with pelvic pain and vaginal mass on exam, imaging demonstrated possible adnexal pathology. Pelvic ganglioneuroma can be a unique presentation of pelvic pain with misleading imaging findings.

2431 Birth of a healthy infant after intracytoplasmic sperm injection using pentoxifylline-activated sperm from a patient with Kartagener's syndrome



H. Hattori, Y. Nakajo, C. Ito, Y. Toyama, K. Toshimori, and K. Kyono

Sendai and Chiba, Japan

The authors report a successful pregnancy from a single vitrified–warmed blastocyst after intracytoplasmic sperm injection using pentoxifylline-activated sperm from a patient with Kartagener's syndrome.

2432 Heterotopic pregnancy in a cross border oocyte donation patient: the importance of cooperation between centers



F. Mancini, E. Clua, F. Martínez, C. Battaglia, A. Veiga, and P. N. Barri

Barcelona, Spain; and Bologna, Italy

We report a case of tubal heterotopic pregnancy after oocyte donation in a cross border patient and discuss the ethical and medical implications of cross border reproductive care.

2431 The first case described: monozygotic twin sisters with the fragile X premutation but with a different phenotype for premature ovarian failure



E. B. Johnston-MacAnanny, P. Koty, M. Pettenati, M. Brady, T. M. Yalcinkaya, and D. W. Schmidt

Winston-Salem, North Carolina; and Farmington, Connecticut

Case of 22 year-old karyotypically normal monozygotic twins concordant for the same fragile X premutation yet discordant for premature ovarian failure (POF).

2432 GnRH antagonist rescue of a long-protocol IVF cycle and GnRH agonist trigger to avoid ovarian hyperstimulation syndrome: three case reports



F. Martínez, D. B. Rodríguez, R. Buxaderas, R. Tur, F. Mancini, and B. Coroleu

Barcelona, Spain

IVF cycles with long protocol at high risk of severe ovarian hyperstimulation syndrome can be rescued by withdrawing the agonist and initiating an antagonist followed by agonist trigger. Further studies are needed.

2433 Retroperitoneal ectopic pregnancy after intrauterine insemination



A. Martínez-Varea, J. J. Hidalgo-Mora, V. Payá, I. Morcillo, E. Martín, and A. Pellicer
Valencia, Spain

Retroperitoneal pregnancy after assisted reproductive techniques is an exceptional condition that must be considered in patients with clinical findings suggesting ectopic pregnancy if both uterus and adnexa are normal during laparoscopic exploration.

2433 A novel approach to cervical reconstruction using vaginal mucosa-lined polytetrafluoroethylene graft in congenital agenesis of the cervix



D. H. Nguyen, C.-L. Lee, K.-Y. Wu, and M.-H. Cheng
Taoyuan, Taiwan

Successful reconstruction of the neocervix in a patient with congenital cervical agenesis was achieved using a vaginal mucosa-lined polytetrafluoroethylene graft. The 6-month follow-up evaluation showed a return of normal menses.

2433 Complex X chromosome rearrangement delineated by array comparative genome hybridization in a woman with premature ovarian insufficiency



M. E. Ochalski, N. Engle, A. Wakim, B. J. Ravnan, L. Hoffner, A. Rajkovic, and U. Surti
Pittsburgh, Pennsylvania; and Spokane, Washington

We investigate candidate genes affected by a complex X chromosome rearrangement that may play a role in the diagnosis of a woman with spontaneous premature ovarian insufficiency.

2433 Meiotic segregation of complex reciprocal translocations: direct analysis of the spermatozoa of a t(5;13;14) carrier



F. Pellestor, J. Puechberty, A. Weise, G. Lefort, T. Anahory, T. Liehr, and P. Sarda
Montpellier, France; and Jena, Germany

A high 69% rate of imbalances and an interchromosomal effect were found in a balanced complex reciprocal translocation t(5;13;14)(q23;q21;q31).

2434 Osseous metaplasia of the cervix and endometrium: a case of secondary infertility



I. Polat, O. Sahin, G. Yildirim, E. Karaman, A. Erim, and A. I. Tekirdag
Istanbul, Turkey

A 31-year-old patient with secondary infertility owing to osseous metaplasia of the endometrium and cervix in whom uterine perforation occurred during the removal of bone fragments is presented.

2434 A case of diffuse uterine leiomyomatosis who had two successful pregnancies after medical management



R. Purohit, J. G. Sharma, and S. Singh
Orissa, India

Conservative treatment with GnRH analogue may help to achieve successful pregnancy in a case of diffuse uterine leiomyomatosis.

2434 Hypercalcemia: an unusual etiology of a common menopausal symptom



A. Roark, B. P. Wilson, K. M. Eyster, G. L. Timmerman, B. L. Allard, and K. A. Hansen
Sioux Falls and Vermillion, South Dakota; and Spencer, Iowa

A menopausal patient with primary hyperparathyroidism presented with hot flushes that were atypical in character and therapeutic response.

2434 Concomitant unilateral and synchronous bilateral testis cancer in azoospermic dizygotic twins: differential management of fertility preservation



A. Safsaf, L. Sibert, J.-M. Cleret, A. Perdrix, J.-P. Milazzo, F. Gobet, B. Mace, and N. Rives
Rouen, France

Clinicians should be aware of the need to recommend sperm banking before treatments that will make the patient susceptible to altered spermatogenesis. Testicular sperm extraction may be the sole option for fertility preservation in cases of bilateral testicular cancer.

2434 Leiomyomas in adolescents



K. N. Wright and M. R. Laufer
Boston, Massachusetts

The authors report a rare case of a recurrent uterine leiomyoma presenting as a 16-cm pelvic mass in an adolescent and describe the incidence, pathogenesis, and fertility implications of leiomyomas in adolescents.

2435 Severe intra-abdominal bleeding from neglected omental implantation of ectopic tissue after methotrexate treatment for persistent ectopic pregnancy



M.-C. Wu, W.-C. Huang, H.-H. Lin, and S.-M. Hsiao
New Taipei City and Taipei, Taiwan

Persistent EP after laparoscopic linear salpingostomy can occur in the omentum. Meticulous clinical follow-up should be performed, especially when IM MTX injection is used as salvage treatment.

2435 Morphologically abnormal oocytes not capable of fertilization despite repeated strategies



X. Xing, H. Zhao, M. Li, M. Sun, Y. Li, and Z.-J. Chen
Jinan, People's Republic of China

A successful pregnancy and live birth were achieved for a patient with morphologically abnormal oocytes after repeated total fertilization failure.

e28



– Reply: L. M. Stewart, C. D'Arcy J. Holman, R. Hart, J. Finn, Q. Mai, and D. B. Preen
Crawley, Western Australia, Australia

e29



Low-molecular-weight-heparin in recurrent implantation failure

S. Seshadri and S. K. Sunkara
London, United Kingdom

2435 Complete hysteroscopic resection of a large atypical polypoid adenomyoma, followed by a successful pregnancy



T. Yahata, T. Nonaka, A. Watanabe, M. Sekine, and K. Tanaka
Niigata, Japan

A large APA lesion in 29-year-old female was completely resected by a pathologically guided hysteroscopic surgery. She spontaneously conceived and has been free from disease 3 years after the surgery.

e30



– Reply: B. Berker and S. Taşkın
Ankara, Turkey

e31



Increased diagnostic accuracy of laparoscopy in endometriosis using indigo carmine: a new technique

M. Canis, H. Manhes, and G. Mage
Clermont-Ferrand, France

e32



– Reply: A. Rauh-Hain and M. R. Laufer
Boston, Massachusetts

2435 Middle cerebral artery thrombosis after IVF and ovarian hyperstimulation: a case report



Z. Jing and L. Yanping
Hunan, People's Republic of China

A woman developed cerebral artery thrombosis after ovarian hyperstimulation syndrome (OHSS). After therapy, the patient survived with some neurologic sequelae. Prevention of OHSS is key to preventing thrombosis, and therapy should be given immediately after thrombosis is suspected.

e33



Acupuncture: when classical meets modern

Z. Shi, L. Ma, Y. Yang, X. Li, S. Wang, W. Lu, and X. Zhao
Guangzhou and Harbin, People's Republic of China

e34



– Reply: I. Moy and M. P. Milad
Chicago, Illinois

e35



Intravenous immunoglobulin and recurrent miscarriage

O. B. Christiansen, E. C. Larsen, M. Husth, and B. Pedersen
Copenhagen, Aarhus, and Aalborg, Denmark

OBITUARY

2436 Tribute to Mary G. Hammond, M.D.

R. D. Kempers
Naples, Florida

e36



– Reply: B. Ata and W. Buckett
Montreal, Quebec, Canada

LETTERS TO THE EDITOR

e25 Endometrioma and in vitro fertilization



A. Tocci and C. Lucchini
Rome, Italy

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EG-VEGF concentrations may predict OHSS

L. C. Ajonuma, M. U. Ajuonuma, B. C. Ajuonuma, V. M. Ogbedeagu, J. U. Ajuonuma, and C. L. Chukwu
Imo State, Niger State, Gwagwalada, and Rivers State, Nigeria; and Dagupan City, Philippines

e26 – Reply: B. Almog and T. Tulandi
Montreal, Quebec, Canada



e38



– Reply: M.-Z. Gao, X.-m. Zhao, and Z.-G. Sun
Shanghai, People's Republic of China

e27 How effective is in vitro fertilization, and how can it be improved?



F. F. Verit and A. Verit
Sanliurfa, Turkey

e39



Fresh testicular immotile sperm and viability testing

A. Malpani and A. Malpani
Bombay, India

e40 – **Reply:** V. Mangoli
Mumbai, India



e41 **Blastocyst culture and MZT after SET**

L. Dessolle and T. Fréour
Nantes, France



e42 – **Reply:** S. Kawachiya, D. Bodri, and O. Kato
Tokyo, Japan



e43 **Vitrification with UV-sterilized supercooled air**

L. Parmegiani
Bologna, Italy



e44 – **Reply:** M. G. Larman and D. K. Gardner
Melbourne, Victoria, Australia



e45 **Fertility in patients with 5-alpha-reductase-2 deficiency**

E. Marumudi and A. C. Ammini
New Delhi, India



e46 – **Reply:** T. Ogata and K. Matsubara
Tokyo, Japan



e47 **Inositol effects on ovulation induction in patients with polycystic ovary syndrome**

E. Papaleo
Milan, Italy



e48 **Comments on the role of inositol supplementation in patients with polycystic ovary syndrome**

P. Rizzo and E. Raffone
Messina, Italy



e49 – **Reply:** G. Morgante and V. De-Leo
Siena, Italy



e50 **An explanation for the true origin of spontaneous pregnancies after subcutaneous ovarian transplantation**



X. Chen
Guangzhou, People's Republic of China

e51 – **Reply:** K. Oktay, I. Türkçüoğlu, and K. Rodriguez-Wallberg
Valhalla, New York



e52 **Unknown risk of the reintroduction of malignant cells in a Danish cohort of women autotransplanted with ovarian tissue**



L. Bastings, J. R. Westphal, C. C. M. Beerendonk, D. D. M. Braat, and R. Peek
Nijmegen and Hertogenbosch, the Netherlands

e53 – **Reply:** K. T. Schmidt, M. Rosendahl, E. Ernst, A. Loft, A. N. Andersen, and C. Y. Andersen
Copenhagen and Aarhus, Denmark



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